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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/042,153	08/29/2001	Masayoshi Shiga	P/1250-214	6816

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EXAMINER

MOORE, KARLA A

ART UNIT	PAPER NUMBER
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1763

DATE MAILED: 10/09/2002

3

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

09/942,153

Applicant(s)

SHIGA ET AL.

Examiner

Karla Moore

Art Unit

1763

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☐ Responsive to communication(s) filed on \_\_\_\_.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-6 and 9-19 is/are pending in the application.
- 4a) Of the above claim(s) 7-8 is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-19 is/are rejected.
- 7) ☒ Claim(s) \_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 29 August 2001 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on \_\_\_\_ is: a) ☐ approved b) ☐ disapproved by the Examiner.
- If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

**Priority under 35 U.S.C. §§ 119 and 120**

- 13) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application).
- a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

**Attachment(s)**

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s) \_\_\_\_.
- 4) ☐ Interview Summary (PTO-413) Paper No(s). \_\_\_\_.
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: \_\_\_\_\_.

**DETAILED ACTION**

***Election/Restrictions***

1. Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-7 and 9-19, drawn to a substrate processing apparatus, classified in class 118, subclass 719.
- II. Claims 7 and 8, drawn to a substrate inspection method, classified in class 438.

The inventions are distinct, each from the other because of the following reasons:

2. Inventions II and I are related as process and apparatus for its practice. The inventions are distinct if it can be shown that either: (1) the process as claimed can be practiced by another materially different apparatus or by hand, or (2) the apparatus as claimed can be used to practice another and materially different process. (MPEP § 806.05(e)). In this case, the process as claimed, could be performed by hand.
3. Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.
4. During a telephone conversation with Mr. James Finder on 09/27/02 a provisional election was made without traverse to prosecute the invention of Group 1, claims 1-7 and 9-19. Affirmation of this election must be made by applicant in replying to this Office action. Claims 7 and 8 are withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.
5. Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

***Claim Rejections - 35 USC § 102***

6. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

7. Claims 1-2, 9-12 and 17-19 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,256,204 to Wu.

8. Wu discloses a substrate processing apparatus successively transporting a substrate between a plurality of processing parts (Figure 2, 20) thereby performing prescribed processing on said substrate, comprising: a transport robot (50; column 6, row 67-column 7, row 13) successively transporting said substrate between said plurality of processing parts along a prescribed procedure; and a plurality of inspection parts (column 5, rows 31-37) of different contents respectively, provided in said substrate processing apparatus.

9. With respect to claim 2, said transport robot transports said substrate to selected inspection parts partially or totally selected from said plurality of inspection parts (column 8, rows 40-44).

10. With respect to claims 9 and 17, Wu further discloses the substrate processing apparatus as comprising: an procedure setting part (carrier processor, column 11, rows 27-31) capable of incorporating substrate transportation to said inspection part into an arbitrary order position in said procedure; and a transportation control part (vehicle computer, column 11, rows 31-35) controlling said transport part to successively transport said substrate along said procedure set by said procedure setting part.

11. With respect to claims 10-11 and 18-19, Wu also teaches that the apparatus can be used to process substrates individually or in a batch (column 2, rows 26-28); therefore, the procedure setting part is

Art Unit: 1763

necessarily capable of setting said procedure every said substrate or every set of a prescribed number of substrates.

12. With respect to claim 12, Wu teaches that the apparatus may comprise plural "inspection machines" (column 5, rows 31-37).

13. Claims 1-6 are rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,695,564 to Imahashi.

14. Imahashi discloses a substrate processing apparatus successively transporting a substrate between a plurality of processing parts (Figure 8, column 14, rows 6-11) thereby performing prescribed processing on said substrate, comprising: a transport robot (U2a, U2b, U2c, U2d) successively transporting said substrate between said plurality of processing parts along a prescribed procedure; and a plurality of inspection parts (U3a, U3d, U3c) of different contents respectively, provided in said substrate processing apparatus.

15. With respect to claim 2, said transport robot transports said substrate to selected inspection parts partially or totally selected from said plurality of inspection parts (column 8, rows 40-44).

16. With respect to claim 3, said transport robot successively transports a set of plural substrates (a set of substrates from wafer cassette C are processed one after another in the processing system depicted in Figure 8) along the same procedure so that said set of plural substrates are subject to the same processing and said transport robot transports each of part or all of said set of plural substrates to a single inspection part selected from the plurality of inspection parts thereby transporting at least one of said set of plural substrates to each of said plurality of inspection parts.

17. With respect to claim 4, a transport path (processing transport path proceeds from left to right in Figure 8) is formed along said procedure, and each of said plurality of inspection parts is arranged on an intermediate position in said transport path responsive to the inspection contents thereof.

18. With respect to claim 5, a processing condition may be changed in any of said plurality of processing parts on the basis of results if said inspections performed by said plurality of inspection parts (column 9, rows 24-28).

Art Unit: 1763

19. With respect to claim 6, said plurality of inspection parts include at least two of a resist film thickness measuring part, a pattern line with measuring part, a pattern overlay measuring part and a macro defect inspection part. Specifically, the apparatus teaches inspection parts, such as a thickness measuring part and a defect inspection part (foreign matter testing device) (column 9, rows 12-25).

***Claim Rejections - 35 USC § 103***

20. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

21. Claims 13-16 are rejected under 35 U.S.C. 103(a) as being unpatentable over Wu as applied to claim s1-2, 9-12 and 17-19 above, and further in view of U.S. Patent No. 6,313,903 to Ogata.

22. Wu disclose the invention substantially as claimed and as described above. With respect to claims 15 and 16, Wu teaches that the apparatus can be used to process substrates individually or in a batch (column 2, rows 26-28); therefore, the procedure setting part is necessarily capable of setting said procedure every said substrate or every set of a prescribed number of substrates.

23. However, Wu fails to teach an apparatus, wherein each of said plurality of inspection parts is any of a thickness measuring part measuring the thickness of a resist film, a line width measuring part measuring the line width of a pattern, an overlay measuring part measuring overlay of said pattern and a macro defect inspection part, nor does Wu disclose any of said plurality of inspection parts is capable of performing resist film thickness measurement, pattern line width measurement and pattern overlay measurement.

24. Ogata discloses an inspection apparatus for inspecting a resist pattern, comprising: a thickness measuring part measuring the thickness of a resist film, a line width measuring part measuring the line width of a pattern, an overlay measuring part measuring overlay of said pattern, a macro defect

Art Unit: 1763

inspection part and other types of inspecting processes for the purpose of determining whether or not a resist pattern is acceptable (column 3, rows 16-19 and column 4, rows 59 through row 5, column 25).

25. It would have been obvious to one of ordinary skill in the art at the time the Applicant's invention was made to have provided an inspection part capable of the claimed inspection processes in Wu in order to determine whether or not the resist pattern was acceptable as taught by Ogata.

### **Conclusion**

26. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Karla Moore whose telephone number is 703.305.3142. The examiner can normally be reached on Monday-Friday, 8:30am-5:30pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Gregory Mills can be reached on 703.308.1633. The fax phone numbers for the organization where this application or proceeding is assigned are 703.872.9310 for regular communications and 703.872.9311 for After Final communications.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703.308.0661.

km  
October 3, 2002

  
**GREGORY MILLS**  
**SUPERVISORY PATENT EXAMINER**  
**TECHNOLOGY CENTER 1700**